Original Article

Euromediterranean Biomedical Journal
for young doctors
(formerly: Capsula Eburnea)

Multidimensional analysis of self-esteem in a group of children with ADHD

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SUMMARY

Attention Deficit Hyperactivity Disorder (ADHD) is characterised by low levels of internalizing symptoms and self-efficacy which causes low self-esteem, while externalizing behaviours appear to be related to high levels of stress in the parents.

The purpose of this research is to analyze the impact of ADHD on self-esteem and parental stress. A multidimensional assessment of self-esteem was performed using the MSCS (Multidimensional Self-Concept Scale) in a group of 12 male patients with ADHD (age range 9-11 years). Parental stress was investigated using the Parenting Stress Index (PSI). These results were compared with a group of 12 healthy children (age 9-11 years), with both parametric statistics and correlation statistics.

The comparison between ADHD children and control subjects, performed by a calculation to rank with the Mann-Whitney, showed a high significance in two dimensional components of self-esteem: social relationships (Z -2.028 p 0.045) and academic success (Z -2.166 p 0.028). The total self-esteem score differed significantly between the two groups (Z -2.227 p 0.024). Parental stress increaseed with the level of the child's oppositional symptoms (p 0.790) but it did not correlate with the other scores (cognitive problems / inattention p 0.381); hyperactivity p 0.414; ADHD index p 0.324). The present study shows that self-esteem is impaired among children with ADHD.

Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a common child and adolescent disorder that is frequently associated with negative outcomes, such as emotional and behavioural problems and low self-esteem and self perception (1,2,3).

ADHD involves the totality of child experiences and makes it difficult to achieve success and fulfillment at school (4), at home and during free time.Increasingly the literature suggests that affected children are more likely to experience school failure, poor peer relationship, and familial conflict (5,6,7). In particular, lower scores in sub-domains of self-esteem such as "skills and talents" and "psychological well-being" have been reported in children with high levels of ADHD symptoms (8). Self-esteem is the ability of individuals to evaluate themselves based on their own experiences and past behavior. It can also predict future behavior. An adequate level of self esteem provides for an individual to have an internalized self confidence despite the opinions of others. An ade-

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***Received**: May 23th, 2012 — **Revised**: June 29th, 2012— **Accepted**: September 8th, 2012*

ISSN 2279-7165 - Euromediterranean Biomedical Journal [online]

quate level of self esteem also allows individuals to build satisfactory and balanced interpersonal relationships. Therefore, the level of self-esteem affects an individual's daily life significantly. Low self-esteem, fueled by negative thoughts and self-defeating beliefs, it is very common among children and adolescents with ADHD. This may lead to many setbacks and failures at school, and punishments from adults as a result of behavioral difficulties.

Impairments in social skills of children with ADHD can also lead to rejection from children of the same age. This is principally a result of the impetuousness with which children with ADHD approach others; they find it particularly difficult to respect rules and personal boundaries.

Receiving criticism and rejection, the self-confidence and sense of personal value ofsuch children gradually decreases. Additionally, the difficult relationships between ADHD children and their peer group can cause further problems to care givers rendering it difficult for them to parent and manage emotional relationships adequately with their children.

The purpose of this study is to analyze the impact of ADHD on different components of self-esteem in children with ADHD and the correlated parental stress.

Material and methods

Subject

The sample consists of a group of 12 boys aged between 9 and 11 attending the clinic of the Unit of Child Psychiatry at the Hospital of Messina. For all children the diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) was formulated according to the criteria of DSM-IV TR (APA, 2005). Neuropsychological assessment was performed on all children using a number of scales and questionnaires on behavior (completed by parents) and tests to investigate executive functions.

The group of subjects with ADHD was compared with a control group, equated for age, gender and education, recruited from schools in the city of Reggio Calabria and its province and examined in the school of origin.

None of the subjects had, ever suffered from attentional and/or learning difficulties or behavioral disorders. All the members of the control group underwent the same assessment as the ADHD children.

Tools

The Multidimensional Self Concept Scale (MSCS), a self-assessment questionnaire, was administered to each child in the respective groups. The MSCS is divided into six equally relevant, not independent, largely overlapping and interrelated components of: social relationships, problem solving, emotions, academic success, family relations and physical experience , as a result, the final test score is a reliable measure of overall self-esteem This questionnaire consists of 150 items with four possible answers: absolutely true, true, not true and absolutely not true..

The Parenting Stress Index (PSI) was administered to all parents of the subjects of every group to identify those situations that could compromise the normal development and functioning of the child. This questionnaire is able to identify children with emotional and behavioral disorders and parents at a high risk of providing dysfunctional parenting.

The instrument assumes that a parent's stress is the result of the characteristics of the child or parent themselves and a series of situations closely related to the role of parent.

The PSI investigates three main domains of stressors: characteristics of the child and parents and life-related events.

To conclude, we administred the Conners Behavioral Scales (CPRS Conners' Parents Rating Scales, Conners 1989) to the parents of the ADHD children. These scales allow the evaluation of problematic behaviors in children and, in particular, the assessment of the presence of appositive behavior, cognitive problems or inattention, hyperactivity and social problems. CPRS are multidimensional scales widely used in clinical settings and research for the assessment of ADHD with and without hyperactivity, suitable for children and adolescents aged 3 to 17 years.

Results

The comparison between ADHD children and control subjects, performed by the Mann-Whitney test, showed a high significance in two dimensional components of self-esteem, "Social" (Z -2.028 p 0.045) and "Academic success" (Z -2.166 p 0.028). The total score for self-esteem differed significantly between the two groups (Z -2.227 p 0.024).

Therefore, compared the control sample, ADHD children seem to have poor interpersonal relationships leading from problems in their perception of relational exchange with children of the same age and with leading figures (teachers, parents). Moreover, significant scores were obtained in the area of "Academic Success": children with ADHD have a lower perception of their academic work than the control group. Additionally, the PSI revealed that parents of ADHD children have a significantly different total stress score compared to that of control subjects.

In the internal correlation of the clinical group, by the Pearson correlation coefficient, the most relevant data emerged for the emotional component of self-esteem, scores for which were lower and corresponded with an increase in symptoms of hyperactivity (p - 0.791 *), and in ADHD index (p - .666), higher CPRS scores, and in high total scores on the ADHD Rating Scale (p - .684 *).

However, the most notable result was that the externalizing symptoms of ADHD seem to reduce the total score for self-esteem compared to two components of the Conners scales, Hyperactivity (p -0.820 *), and ADHD index (p 0.817 *). We also saw, again using the Pearson correlation coefficient, that the total parental stress score is correlated with a specific Conners sub scale score. Indeed, parental stress increased with the levels of oppositional pathway in the children (p 0.790 *) but it did not correlate with the other subscales: cognitive problems / inattention (p 0.381), hyperactivity (p 0.414) and ADHD index (p 0.324). Finally, we should emphasize that as the child gets older self esteem as regards family relations seemed to increase (p 0.791 **).

Discussion and conclusion

The present study shows that compared to the control group children with ADHD show significant differences with regard to self esteem. The most affected area seems to be that of schooling ; despite their normal cognitive abilities learning is very stressful experience for ADHD children . Executive dysfunctions in areas such as planning, flexibility, response inhibition can lead to poor performance in every task and to consequently low academic results. It is also equally interesting to note that 'Social Relations' scores are significantly different in ADHD subjects, which highlights how relational competences are impaired by the disorder. Disruptive behavior may often result in exclusion by others and prevent the formation of long lasting social relationships.Indeed, ADHD children face many negative experiences that affect their self-confidence, even if they do not have impaired social and communication abilities.

Analyzing the internal correlations of the clinical group, it emerged that both global self-esteem and the subscale of emotion are impaired by externalizing symptoms (evaluated by CPRS).

Even though it has been documented that older children show lower self-esteem (9), in our sample, growing older is associated with improving self-esteem (p 0.791). This is probably related to a gradual reduction of hyperactive and impulsive behaviors.

Data from our study emphasize that the symptoms of ADHD affect self-perception. Good self-perception in scholastic, social and behavioral domains undoubtedly has a protective function for emotional and affective development (10). Thus, it would seem that the analysis of the various dimensions of self-concept is extremely useful for programs aimed at reducing the probability of the onset of psychopathological disorders. The study of self-esteem and its sub-dimensions could therefore have prognostic importance in the evolution of the disorder connected to psychiatric comorbidity.

It is also very important to pay attention to parental stress levels as regards cases of children with ADHD.

The literature documents an association between hyperactivity/impulsivity and parental stress which is expressed in ADHD children by higher levels of aggressiveness, emotional instability and difficulty in executive tasks. The global impairment of self-regulation of cognitive, behavioral and emotional domains seems to have more of an effect on parental stress levels than on the severity of the symptoms of the disorder (11). Parental stress is related to the child's perception of being accepted by the couple and it seems to play an important role in the formation of self-concept in adolescence, while tensions in the parent/child relationship seem to have the greatest impact on the structuring

of self-esteem in early adolescence (12).
Considering the fact that ADHD is often associated with family problems, such as high stress, increased psychopathy in parents and conflictuality in parent-child relationship in comorbidity with oppositive and conduct disorders, it is very important to study familiar factors that may help to better understand the development of psychopathology (13).
Our findings highlight that parents of ADHD children are exposed to higher stressthan parents of the control group and how oppositive dimensions compromise the condition of the ADHD group.
This data is consistent with other studies which have focused on the interaction between disruptive disorders and parental stress leading to alterations in educational behavior (14). An analysis of the ADHD child as regards their family and wider environment is of primary importance and should go hand in hand with the improvement of psychoeducational programs which may prevent the worsening of the symptoms of the disorder (15).
Effective programs of parent training for couples with ADHD children can lower levels of stress and improve behavioral patterns of the child (16). It is necessary to develop therapeutic interventions based on the ADHD subtype (17), identify symptom dimensions (hyperactivity / impulsivity, inattention and combined forms), and, as has been shown here, use internal self-esteem measurements as prognostic markersfor a more individualized psychotherapy program.

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